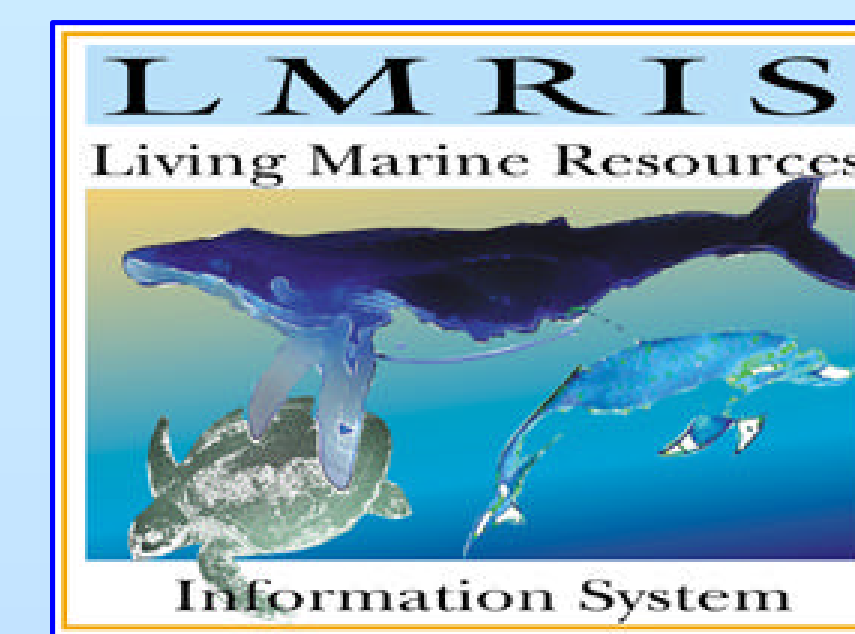


The Living Marine Resources Information System

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WHAT IS LMRIS?

LMRIS is a Web-accessible mapping and information system containing geo-spatially referenced information about marine mammals and turtles (vector and raster) that is primarily based on peer-reviewed literature and government reports (e.g., NMFS stock assessments). The LMRIS study area is depicted in Figure 1.

Cetacean Density Estimates Eastern Pacific

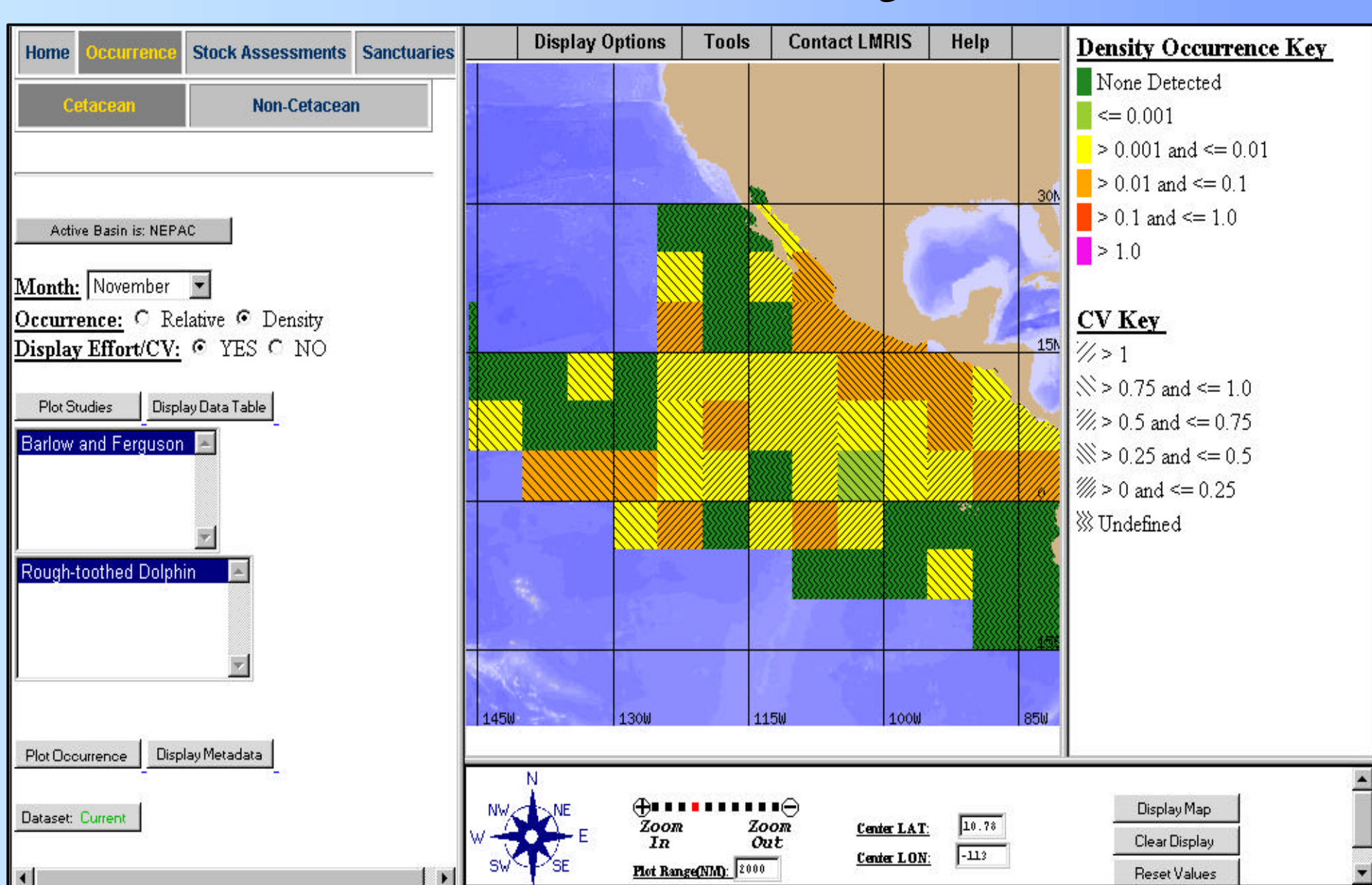


Figure 2.

- Gridded (5° x 5°) density estimates
- Uncertainty overlay (hatching)
- Estimates derived from 1986-1996 NMFS/SWFSC surveys

Cetacean Density Estimates Western North Atlantic

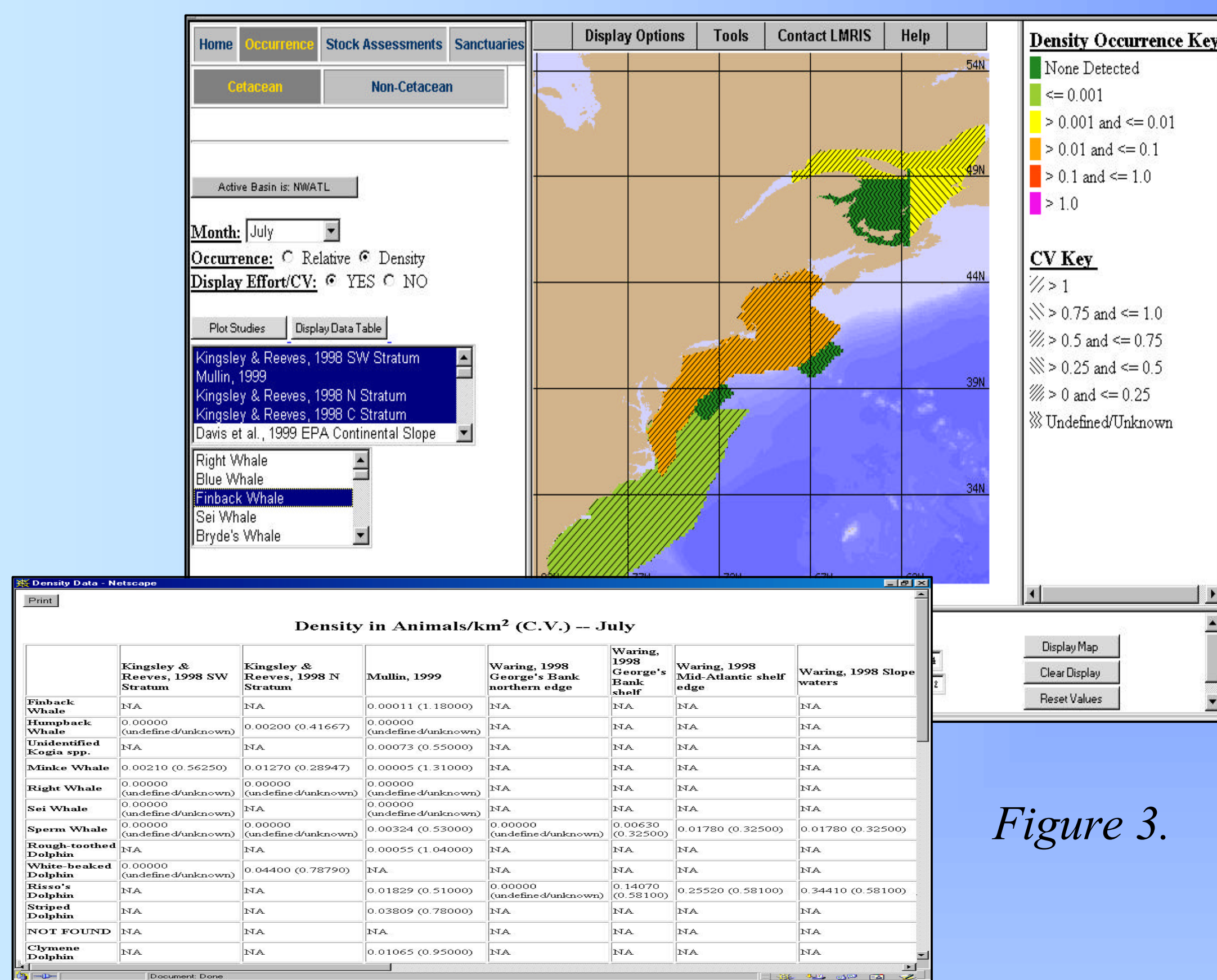


Figure 3.

- Estimates displayed for each survey area
- Data table of all estimates in window
- Uncertainty overlay (hatching)

WHAT IS INCLUDED IN LMRIS?

Taxonomic Groups

- Cetaceans (49 species)
- Pinnipeds (10 species)
- Sea turtles (6 species)
- Manatee & sea otter (1 species each)

Distribution & Abundance

- Cetacean density estimates (Figures 2 & 3)
- Cetacean relative abundance (Figure 4)
- Non-cetacean relative abundance (Figure 5)
- Sea-turtle occurrence

Stock & Population Estimates

- Population estimates
- Stock estimates (e.g., management stocks) (Figure 6)

Natural History

- Species descriptions (Figure 6)
- Range maps

Metadata (Figure 7)

Stock Estimates / Natural History

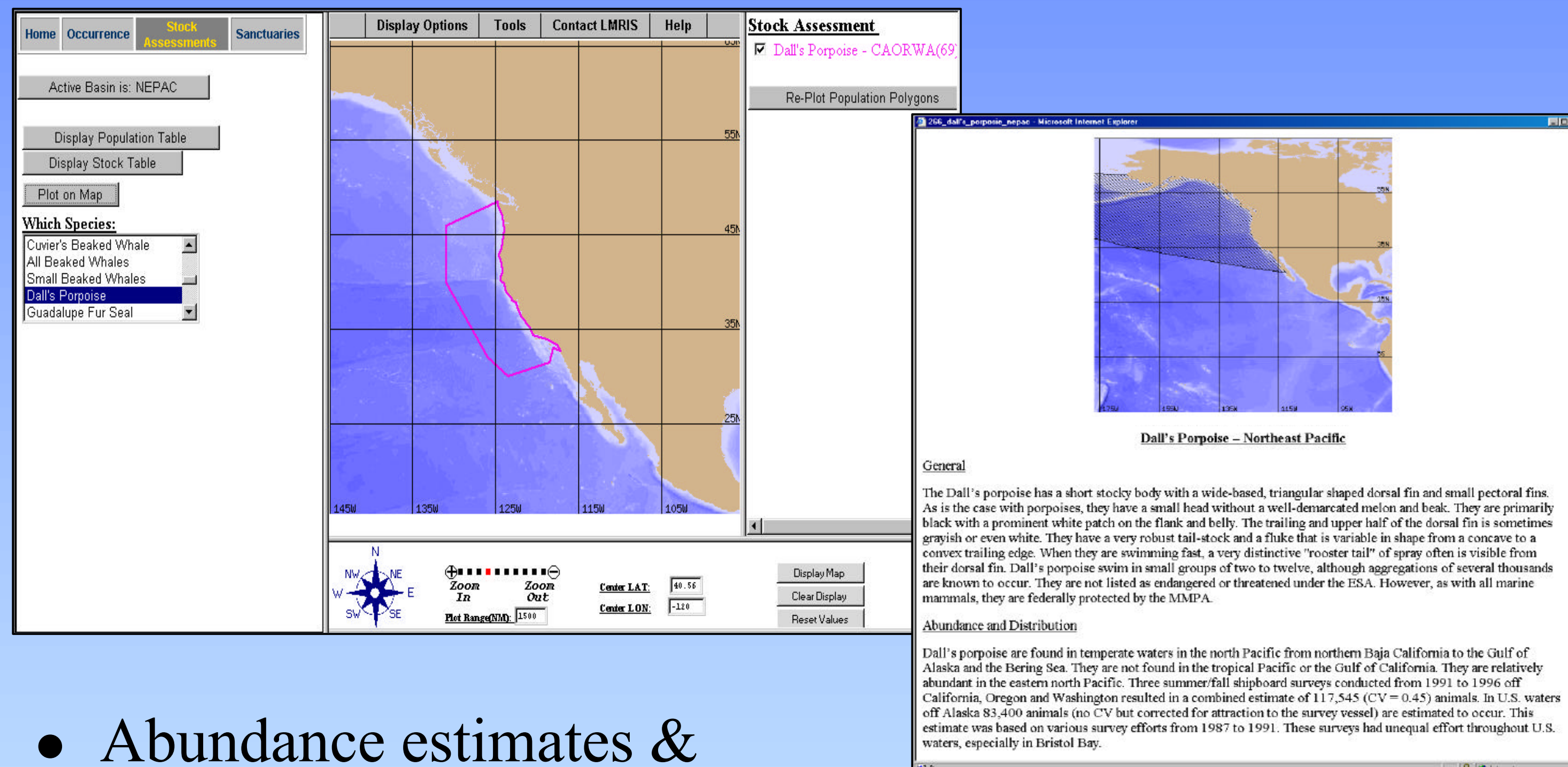


Figure 4.

- Abundance estimates & associated polygons
- Dynamic link to stock table
- Dynamic link to species description and range map

LMRIS APPLICATIONS

LMRIS is intended to provide compiled, easily accessible information about marine mammals and turtles for use in planning and environmental documentation (e.g., EA/OEA and EIS/OEIS preparation) by the U.S. Navy. All information in LMRIS is referenced to its primary source so that it can be cited easily. Currently, there are no raw data accessible from LMRIS.

Cetacean Relative Abundance

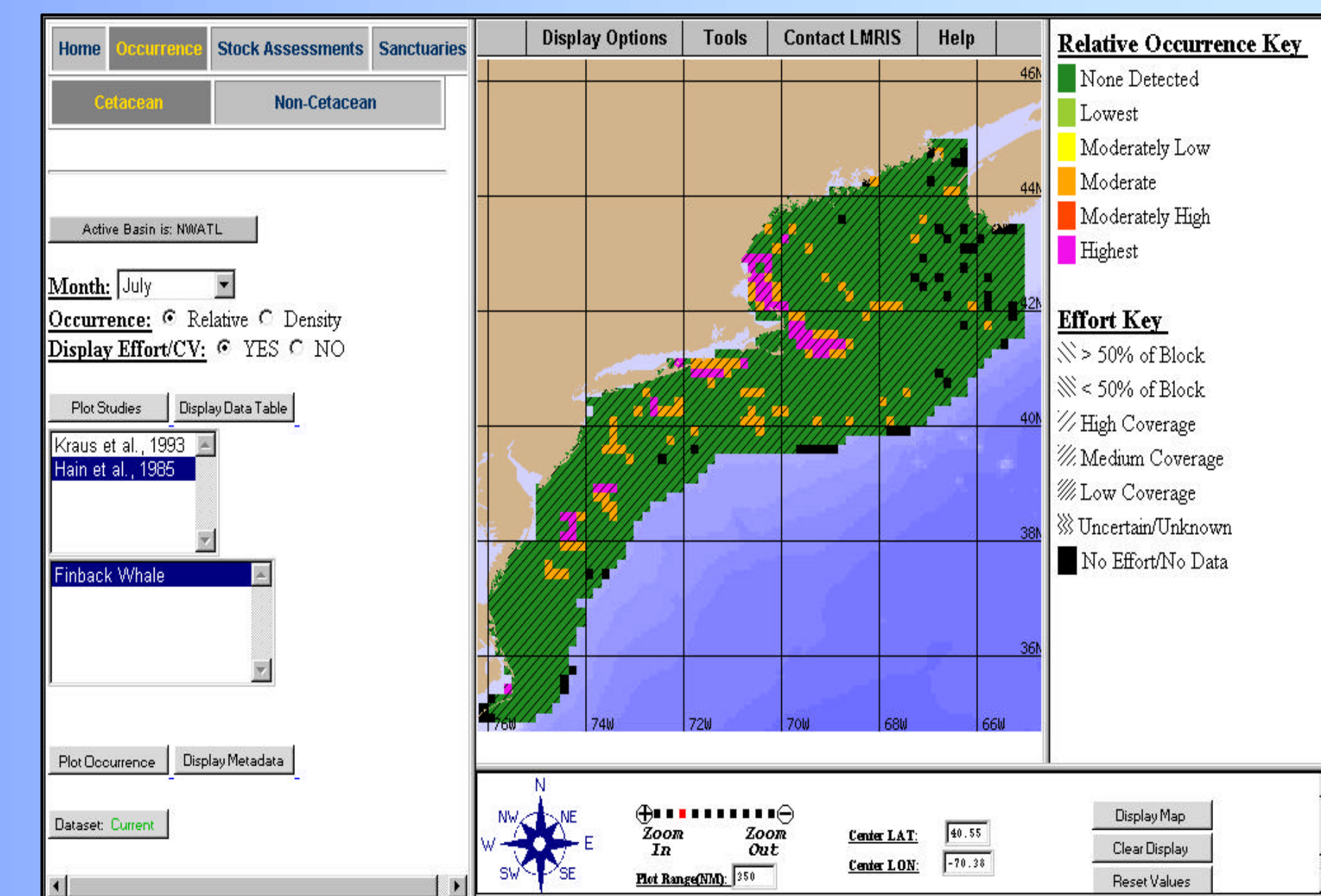


Figure 4.

- Grid resolution up to 10'
- Effort overlay (hatching)
- Rank information in metadata

Non-Cetacean Relative Abundance

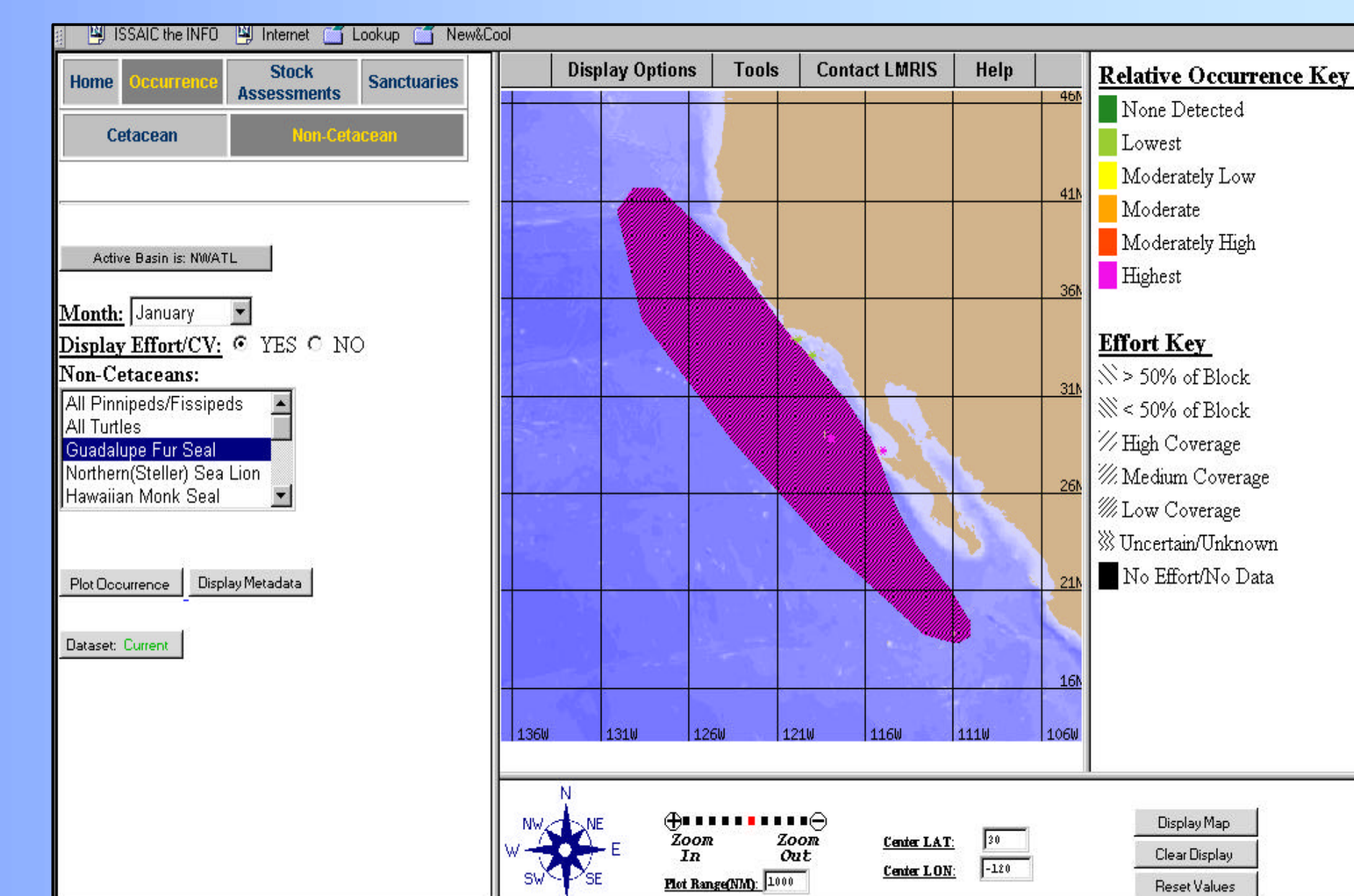


Figure 5.

- Effort overlay (hatching)
- Ranking criteria in metadata

Metadata

- Study area
- Study type
- Study years
- Study months
- Species
- Data type
- Ranking criteria (for relative abundance data types only)

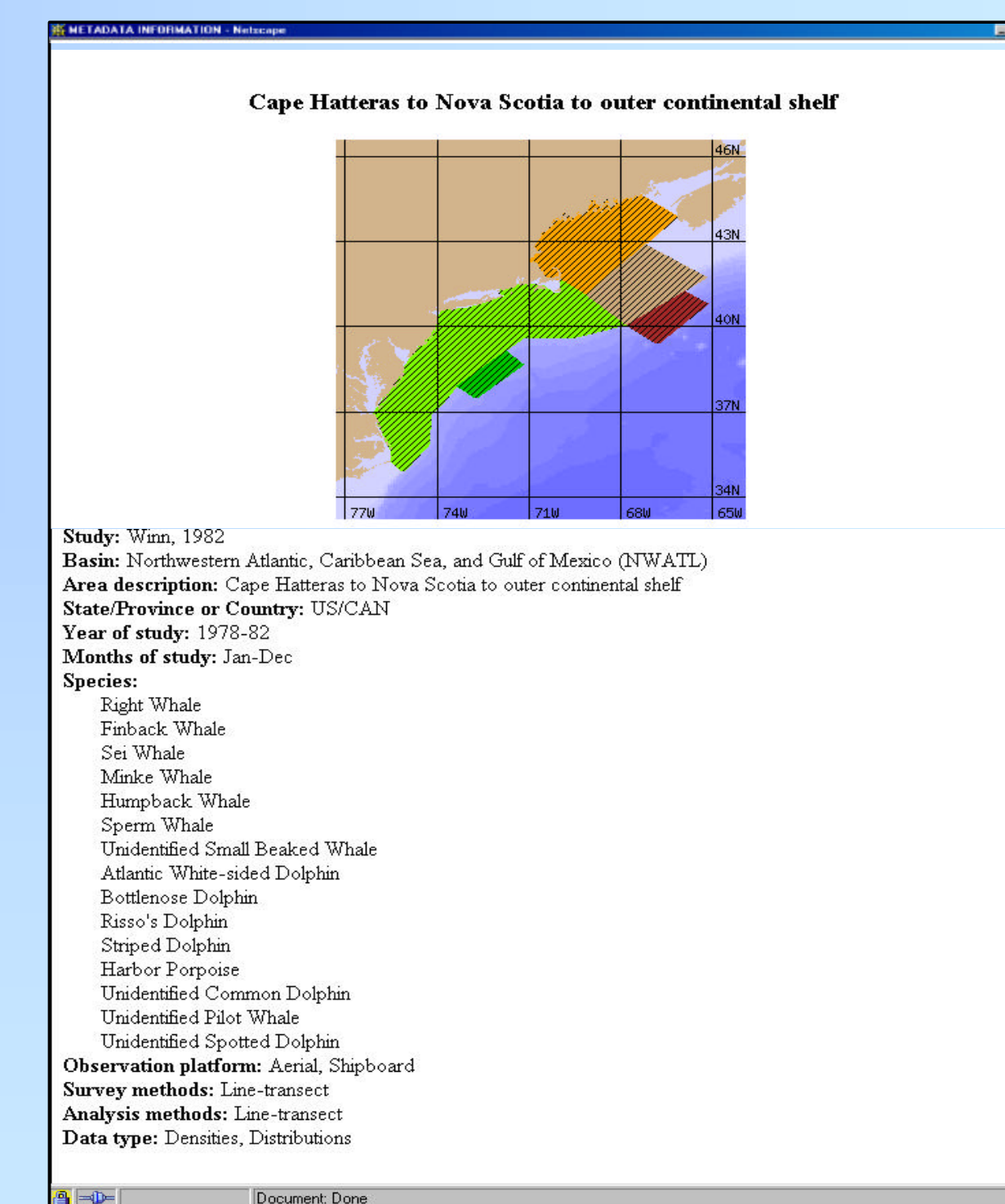


Figure 7.

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